

REMARKS

Claims 1-17 and 21-29 are pending in this application. Claim 1-17 and 21-29 are rejected. Reconsideration of this application in light of the below remarks is respectfully requested. Also, it is to be appreciated that while reference may be made back to certain parts of the application (e.g., page numbers, line numbers, Figs., etc.), that such referencing is not to be interpreted in a limiting manner (e.g., to limit the scope of the claims and/or features therein to the particular portion(s) referenced), but is instead merely done for purposes of explanation, illustration and/or ease of understanding.

I. CLAIM REJECTIONS UNDER 35 U.S.C. § 103.

Claims 1, 4-7, 8-13, 15-17, 21, 23, and 25-28 are rejected under 35 U.S.C. § 103(a) as being unpatentable in view of Benveniste (USPN 5,554,857). Withdrawal of this rejection is respectfully requested for at least the following reasons.

Benveniste does not teach permanent magnets as provided in independent claim 1, and there is no motivation to modify Benveniste to comprise such magnets.

More particularly, Benveniste is concerned with ***controlling and varying a magnetic field produced by an electromagnet*** to facilitate beam control (Col. 2, lines 20-53; Col. 4, lines 25-28). To this end, ***Benveniste goes into significant detail about controlling current to vary a resulting magnetic field***, including disclosing at least fourteen current carrying coils that can be selectively energized to control a magnetic field (Col. 6, lines 8-14). Similarly, Benveniste discusses selectively reversing the direction of current running through coils to develop a magnetic field that has a zoom lens effect (Col. 8, lines 38-40). Benveniste makes no mention, however, of using ***permanent magnets*** to mass analyze an ion beam. It is thus respectfully submitted that no motivation exists to modify Benveniste to comprise permanent magnets, and that implementing permanent magnets in Benveniste would instead defeat the purpose of Benveniste of being able to controllably adjust a magnetic field. As such, it is respectfully submitted that claim 1 is not obvious in view of Benveniste.

Claims 4-7, 9-13, and 15-17 depend from claim 1 and thus are also not obvious in view of Benveniste.

Similarly, independent claim 21 provides that a magnetic field is generated from only a first permanent magnet and a second permanent magnet of a mass analyzer, and independent claim 29 provides that a mass analyzer comprises a first permanent magnet and a second permanent magnet. It is respectfully submitted that claims 21 and 29 are not obvious in view of Benveniste for at least the reasons set forth above with regard to independent claim 1. Claims 23 and 25-28 depend from claim 21 and thus are also not obvious in view of Benveniste.

Withdrawal of this rejection is therefore respectfully requested.

II. CLAIM REJECTIONS UNDER 35 U.S.C. § 103.

Claims 2 and 22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Benveniste (5,554,857) in view of Vahrenkamp (4,315,153). Withdrawal of this rejection is respectfully requested for at least the following reasons.

Claim 2 depends from independent claim 1 and claim 22 depends from independent claim 21. As set forth above, independent claims 1 and 21 are allowable over Benveniste. Vahrenkamp fails to cure the deficiencies of Benveniste. Accordingly, claims 2 and 22 are allowable over the suggested combination of Benveniste in view of Vahrenkamp. Withdrawal of this rejection is therefore respectfully requested.

III. CLAIM REJECTIONS UNDER 35 U.S.C. § 103.

Claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Benveniste (5,554,857) in view of Horsky et al. (US Patent Application Publication No. 2004/0104682). Withdrawal of this rejection is respectfully requested for at least the following reasons.

Claim 3 depends from independent claim 1. As set forth above, independent claim 1 is allowable over Benveniste. Horsky et al. fail to cure the deficiencies of Benveniste. Accordingly, claim 3 is allowable over the suggested combination of Benveniste in view of Horsky et al. Withdrawal of this rejection is therefore respectfully requested.

IV. CLAIM REJECTIONS UNDER 35 U.S.C. § 103.

Claims 14 and 24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Benveniste (5,554,857). Withdrawal of this rejection is respectfully requested for at least the following reasons.

Claim 14 depends from independent claim 1 and claim 24 depends from independent claim 21. As set forth above, independent claims 1 and 21 are allowable over Benveniste. Accordingly, dependent claims 14 and 24 are likewise allowable over Benveniste. Withdrawal of this rejection is therefore respectfully requested.

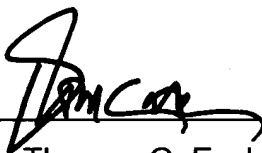
V. CONCLUSION

For at least the above reasons, pending claims currently under consideration are believed to be in condition for allowance and notice thereof is respectfully requested.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should any fees be due as a result of the filing of this response, the Commissioner is hereby authorized to charge the Deposit Account Number 50-1733, EATNP139US.

Respectfully submitted,
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